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| APPLICATION NO.                                                                               | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|-----------------------------------------------------------------------------------------------|-------------|----------------------|----------------------|------------------|
| 10/722,120                                                                                    | 11/26/2003  | Denis Babin          | 2107.1410000/TUM     | 4840             |
| 28393                                                                                         | 7590        | 12/06/2005           | EXAMINER             |                  |
| STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.<br>1100 NEW YORK AVE., N.W.<br>WASHINGTON, DC 20005 |             |                      | HEITBRINK, TIMOTHY W |                  |
|                                                                                               |             |                      | ART UNIT             | PAPER NUMBER     |
|                                                                                               |             |                      | 1722                 |                  |

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/722,120

Applicant(s)

BABIN ET AL.

Examiner

Tim Heitbrink

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                                                            |                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-23-05</u> | 6) <input type="checkbox"/> Other: _____                                                |

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 8-13, 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "diamond-type" is indefinite since "type" broadens "diamond" an indeterminate amount.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1,4,5 (as dependent upon claims 1 and 4), 8, 11, 12 (as dependent upon claim 8 and 11), 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gellert et al. (US Patent 5,658,604).

Gellert et al. discloses a hot runner manifold 62, a nozzle 12 and a mold 14, the mold 14 defining a mold cavity 68 and a gate 66 into the mold cavity. The nozzle comprising a nozzle body, a tip 42 having a melt channel, and a nozzle seal 86 contacting the mold adjacent the gate such that the mold, the nozzle seal and the tip define an annular melt space adjacent the gate through which melt can flow from the tip melt channel to the gate. The tip 42 is made of a carbide alloy where the alloy acts as a diamond-type material due to its high resistance to corrosion and wear.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2,3, 5 (as dependent upon claims 2 and 3), 9,10, 12 (as dependent upon claims 9 and 10) are rejected under 35 U.S.C. 103(a) as being unpatentable over Gellert et al. (US Patent 5,658,604).

While the seal is not made of a carbide alloy, making the seal of such material would have been obvious since it reduces wear and corrosion and thus reduces down time since fewer worn parts need replacing.

Claims 6,7,13,14,18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gellert et al. as applied to claims 1-5, 8-12,15-17 above, and further in view of Ma et al. (US Patent 6,656,329).


While Gellert et al. does not use molybdenum as an intermediate layer or a laminate layer with the carbide alloy, Ma et al. discloses using molybdenum as a well known abrasion resistant laminate material. It would have been obvious to use molybdenum as a laminate material with carbide alloy since both are well known abrasion resistant materials without any undue experimentation absent any unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Heitbrink whose telephone number is 571-272-1132. The examiner can normally be reached on Monday-Friday 6:30-3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tim Heitbrink  
Primary Examiner  
Art Unit 1722

12-1-05

twh